

WHAT IS CLAIMED IS:

1. A system for downloading pushed content comprising:
a terminal comprising a processor capable of receiving service loading content that identifies download content and has a digital signature, wherein the processor is capable of authenticating the service loading content based upon the digital signature, and if the service loading content is authenticated, pulling the download content to the terminal, and wherein the processor is capable of authenticating the service loading content, and pulling the download content, in response to receiving the service loading content and independent of interaction from a user of the terminal.
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2. A system according to Claim 1, wherein the processor of the terminal is capable of verifying the digital signature with a public key to thereby authenticate the service loading content.
- 15 3. A system according to Claim 2 further comprising:
a push initiator capable of digitally signing the service loading content with a private key associated with the public key, and thereafter transmitting the service loading content to the terminal.
- 20 4. A system according to Claim 1 further comprising:
an origin server associated with the download content, wherein the service loading content identifies the origin server associated with the download content, wherein the processor of the terminal is capable of sending a request for the download content to the origin server when the service loading content is authenticated,
25 and wherein the processor is capable of receiving the download content from the origin server in response to the request.
- 30 5. A system according to Claim 4, wherein the processor of the terminal is capable of operating a download agent, wherein the download agent is capable of receiving a download descriptor, and thereafter receiving the download content.

6. A system according to Claim 5, wherein the download content comprises a plurality of data packets, and wherein the download agent is capable of determining if an interruption occurs in receiving the plurality of data packets such that the download agent receives less than the plurality of data packets of the download content, and if an
5 interruption occurs in receiving the plurality of data packets, recovering the download content such that the download agent receives the plurality of data packets.

7. A system according to Claim 6, wherein the download agent is further capable of determining at least one remaining data packet to be received by the download
10 agent to thereby complete reception of the plurality of data packets of the download content, instructing the origin server to send the at least one remaining data packet, and receiving the at least one remaining data packet such that the download agent receives the plurality of data packets.

15 8. A system according to Claim 4, wherein the download content comprises a plurality of data packets, and wherein the processor of the terminal is capable of operating a download agent capable of receiving the plurality of data packets and receiving at least one information packet regarding at least one group of at least one data packet.

20 9. A system according to Claim 8, wherein the download agent is capable of monitoring the received data packets to determine, based upon at least one information packet, if an interruption occurs in receiving the plurality of data packets such that the download agent receives less than the plurality of data packets of the download content,
25 and wherein the download agent is capable of recovering the download content such that the download agent receives the plurality of data packets if an interruption occurs in receiving the plurality of data packets.

10. A method for downloading pushed content to a terminal, the method
30 comprising:

receiving service loading content at a terminal, wherein the service loading content identifies download content and has a digital signature;

authenticating the service loading content based upon the digital signature; and

pulling the download content to the terminal when the service loading content is

5 authenticated, wherein the service loading content is authenticated, and the download content is pulled, in response to receiving the service loading content and independent of interaction from a user of the terminal.

11. A method according to Claim 10, wherein authenticating the service

10 loading content comprises verifying the digital signature with a public key.

12. A method according to Claim 11 further comprising:

digitally signing the service loading content with a private key associated with the

public key; and

15 transmitting the service loading content to the terminal.

13. A method according to Claim 10, wherein the service loading content

identifies an origin server associated with the download content, and wherein pulling the

download content comprises:

20 sending a request for the download content to the origin server when the service

loading content is authenticated; and

receiving the download content at the terminal from the origin server in response

to the request.

25 14. A method according to Claim 13, wherein receiving the download content

comprises receiving a download descriptor, and thereafter receiving the download

content.

15. A method according to Claim 14, wherein the download content

30 comprises a plurality of data packets, and wherein receiving the download content further

comprises:

5 determining if an interruption occurs in receiving the plurality of data packets such that the terminal receives less than the plurality of data packets of the download content; and if an interruption occurs in receiving the plurality of data packets
5 recovering the download content such that the terminal receives the plurality of data packets.

16. A method according to Claim 15, wherein recovering the download content comprises:

10 determining at least one remaining data packet to be received at the terminal to thereby complete reception of the plurality of data packets of the download content;
10 instructing the origin server to send the at least one remaining data packet; and
10 receiving the at least one remaining data packet such that the terminal receives the plurality of data packets.

15 17. A method according to Claim 13, wherein the download content comprises a plurality of data packets, and wherein receiving the download content comprises receiving the plurality of data packets and receiving at least one information packet regarding at least one group of at least one data packet.

20 18. A method according to Claim 17, wherein receiving the plurality of data packets further comprises:

20 monitoring the received data packets to determine, based upon at least one information packet, if an interruption occurs in receiving the plurality of data packets such that the terminal receives less than the plurality of data packets of the download content; and if an interruption occurs in receiving the plurality of data packets
25 recovering the download content such that the terminal receives the plurality of data packets.

30 19. A computer program product for downloading pushed content to a terminal, the computer program product comprising at least one computer-readable

storage medium having computer-readable program code portions stored therein, the computer-readable program code portions comprising:

5 a first executable portion for receiving service loading content at a terminal, wherein the service loading content identifies download content and has a digital signature;

a second executable portion for authenticating the service loading content based upon the digital signature; and

a third executable portion for pulling the download content to the terminal when the service loading content is authenticated,

10 wherein the second executable portion is adapted to authenticate the service loading content, and the third executable portion is adapted to pull the download content, in response to receiving the service loading content and independent of interaction from a user of the terminal.

15 20. A computer program product according to Claim 19, wherein the second executable portion is adapted verify the digital signature with a public key to thereby to authenticate the service loading content.

20 21. A computer program product according to Claim 20 further comprising:
a fourth executable portion for digitally signing the service loading content with a private key associated with the public key; and
a fifth executable portion for transmitting the service loading content to the terminal.

25 22. A computer program product according to Claim 19, wherein the service loading content identifies an origin server associated with the download content, and wherein the third executable portion is adapted to send a request for the download content to the origin server when the service loading content is authenticated, and thereafter receive the download content at the terminal from the origin server in response to the request.

23. A computer program product according to Claim 22, wherein the third executable portion is adapted to receive a download descriptor, and thereafter receive the download content.

5 24. A computer program product according to Claim 23, wherein the download content comprises a plurality of data packets, and wherein the third executable portion is further adapted to determine if an interruption occurs in receiving the plurality of data packets such that the terminal receives less than the plurality of data packets of the download content, and if an interruption occurs in receiving the plurality of data 10 packets, recover the download content such that the terminal receives the plurality of data packets.

15 25. A computer program product according to Claim 24, wherein the third executable portion is adapted to recover the download content by determining at least one remaining data packet to be received at the terminal to thereby complete reception of the plurality of data packets of the download content, instructing the origin server to send the at least one remaining data packet, and receiving the at least one remaining data packet such that the terminal receives the plurality of data packets.

20 26. A computer program product according to Claim 22, wherein the download content comprises a plurality of data packets, and wherein the third executable portion is adapted to receive the plurality of data packets and receive at least one information packet regarding at least one group of at least one data packet.

25 27. A computer program product according to Claim 26, wherein the third executable portion is further adapted to monitor the received data packets to determine, based upon at least one information packet, if an interruption occurs in receiving the plurality of data packets such that the terminal receives less than the plurality of data packets of the download content, and wherein the third executable portion is adapted to 30 recover the download content such that the terminal receives the plurality of data packets if an interruption occurs in receiving the plurality of data packets.